PATENT   MS164170.02/MSFTP225USA

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent application of:

Applicants(s): Eric J. Horvitz, *et al.*   Examiner: Peling, Andy Shaw

Serial No: 10/021,621   Art Unit: 2144

Filing Date: December 12, 2001

Title: CONTROLS AND DISPLAYS FOR ACQUIRING PREFERENCES, INSPECTING
         BEHAVIOR, AND GUIDING THE LEARNING AND DECISION POLICIES OF AN
         ADAPTIVE COMMUNICATIONS PRIORITIZATION AND ROUTING SYSTEM

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Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

APPEAL BRIEF

Dear Sir:

Applicant submits this brief in connection with an appeal of the above-identified patent application. A credit card payment form is filed concurrently herewith in connection with all fees due regarding this appeal brief. In the event any additional fees may be due and/or are not covered by the credit card, the Commissioner is authorized to charge such fees to Deposit Account No. 50-1063 [MSFTP225USA].

I.   **Real Party in Interest (37 C.F.R. §41.37(c)(1)(i))**

The real party in interest in the present appeal is Microsoft Corporation, the assignee of the present application.

II.   **Related Appeals and Interferences (37 C.F.R. §41.37(c)(1)(ii))**

Appellants, appellants' legal representative, and/or the assignee of the present application are not aware of any appeals or interferences which may be related to, will directly affect, or be directly affected by or have a bearing on the Board's decision in the pending appeal.

III.   **Status of Claims (37 C.F.R. §41.37(c)(1)(iii))**

Claims 1-85 stand rejected by the Examiner. The rejection of claims 1-85 is being appealed.

IV.   **Status of Amendments (37 C.F.R. §41.37(c)(1)(iv))**

No amendments have been entered subsequent to the Final Office Action dated September 20, 2005.

V.   **Summary of Claimed Subject Matter (37 C.F.R. §41.37(c)(1)(v))**

A.   **Independent Claim 1**

Independent claim 1 recites a user interface to manage electronic messages, comprising: a display providing one or more display objects associated with delivery of one or more messages, the messages being automatically classified according to a respective priority value; and one or more inputs associated with the display objects to facilitate adaptation of the user interface to one or more preferences of a user, the one or more inputs includes at least one or more user preferences for assigning a priority value to a voice message based at least in part on acoustical properties of the voice message. (*See e.g.*, page 10, line 5-page 11, line 30, page 19, lines 10-19)

B.   **Independent Claim 23**

Independent claim 23 recites a method associated with message delivery, comprising: generating a priority associated with a message; determining an expected loss of non-review of the message at a current time based at least on the message priority and an expected rate of lost

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opportunity for the user resulting from non-review of the message as a function of time; determining an expected cost of outputting the message at the current time; and alerting a user of the message in response to determining that the expected loss is greater than the expected cost. (*See e.g.*, page 3, lines 22-29, page 40, line 1-page 41, line 20)

C.   Independent Claim 40

Independent claim 40 recites a user interface to manage electronic messages, comprising: means for providing graphical displays associated with one or more messages that have been automatically classified according to a priority of the respective messages; and means for configuring the graphical displays according to one or more user preferences associated with the priority and delivery of the one or more messages, the one or more user preferences includes at least assigning a priority value to a voice message based at least in part on acoustical properties of the voice message. (*See e.g.*, page 10, line 5-page 11, line 30, page 19, lines 10-19)

D.   Independent Claim 41

Independent claim 41 recites a method for delivering messages to a device, comprising: scheduling a period when one or more user profiles are activated; configuring at least one set of parameters for the one or more profiles; assigning priority values to one or more messages, wherein a voice message is assigned a priority value based at least in part on acoustical properties of the voice message; and delivering the one or more messages based at least in part on the priority values, the profile that is activated, and the at least one set of parameters. (*See e.g.*, page 10, line 5-page 11, line 30, page 19, lines 10-19)

E.   Independent Claim 55

Independent claim 55 recites a user interface for an adaptive prioritization and routing system, comprising: one or more controls and displays to at least one of acquire user preferences, inspect behavior, and guide learning and decision policies of the adaptive prioritization and routing system, wherein a voice message is assigned a priority based at least in part on acoustical properties of the voice message; and a user interface associated with the one or more controls and displays that facilitates inspection, control and learning associated with alerting and routing prioritized messages. (*See e.g.*, page 10, line 5-page 11, line 30, page 19, lines 10-19)

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F.   Independent Claim 78

Independent claim 78 recites a user interface for an adaptive prioritization and routing system, comprising: one or more controls and displays to acquire message priority settings associated with the adaptive prioritization and routing system, including settings for priority of voice messages based at least in part on acoustical properties of the voice messages; and a user interface associated with the one or more controls and displays that provides at least one of an adjustable control of an amount of messages received *via* the message priority settings and a feedback directed to the user relating to the settings. (*See e.g.*, page 10, line 5-page 11, line 30, page 19, lines 10-19)

VI.   Grounds of Rejection to be Reviewed (37 C.F.R. §41.37(c)(1)(vi))

A.   Whether claims 23-26 and 34-39 are unpatentable under 35 U.S.C. §102(b) over Robert M. Losee, Jr. (Minimizing Information Overload: The Ranking of Electronic Messages).

B.   Whether claims 1-10 and 40 are unpatentable under 35 U.S.C. §103(a) over Smith, *et al.*, (US 6,463,462 B1) in view of Badt *et al.*, (US 6,542,868 B1), Anderlind *et al.*, (US 6,781,972 B1), Wright *et al.*, (US 6,078,568 A), and Cooper *et al.*, (US 6,757,362 A).

C.   Whether claims 1 and 11 are unpatentable under 35 U.S.C. §103(a) over Smith, *et al.*, (US 6,463,462 B1) in view of Badt *et al.*, (US 6,542,868 B1) and Matthew Marx (CLUES: Dynamic Personalized Message Filtering), hereinafter referred as Marx.

D.   Whether claims 1, 12, 13 and 19-22 are unpatentable under 35 U.S.C. §103(a) over Smith, *et al.*, (US 6,463,462 B1) in view of Badt *et al.*, (US 6,542,868 B1), Eggleston *et al.* (US 6,101,531 A), and Wright *et al.*, (US 6,078,568 A).

E.   Whether claims 1 and 14 are unpatentable under 35 U.S.C. §103(a) over Smith, *et al.*, (US 6,463,462 B1) in view of Badt *et al.*, (US 6,542,868 B1) and Jonathan Isaac Helfman *et al.* (Ishmail: Immediate Identification of Important Information).

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F.   Whether claims 1 and 15-18 are unpatentable under 35 U.S.C. §103(a) over Smith, *et al.*, (US 6,463,462 B1) in view of Badt *et al.*, (US 6,542,868 B1) and Jonathan Isaac Abu-Hakima (US 6,499,021 B1).

G.   Whether claims 27-33 are unpatentable under 35 U.S.C. §103(a) over Robert M. Losee, Jr. (Minimizing Information Overload: The Ranking of Electronic Messages) as applied to claim 23 above, and further in view of Eggleston *et al.* (US 6,101,531 A).

H.   Whether claims 41-54 are unpatentable under 35 U.S.C. §103(a) over Juha Takkinen (CAFE: A Conceptual Model for Managing Information in Electronic Mail) in view of Badt *et al.*, (US 6,542,868 B1) and Jonathan Isaac Abu-Hakima (US·6,499,021 B1).

I.   Whether claims 55-85 are unpatentable under 35 U.S.C. §103(a) over Jonathan Isaac Abu-Hakima (US 6,499,021 B1) in view of Badt *et al.*, (US 6,542,868 B1), Wright *et al.*, (US 6,078,568 A), and Eggleston, *et al.* (US 6,101,531 A).

VII.   Argument (37 C.F.R. §41.37(c)(1)(vii))

A.   Rejection of Claims 23-26 and 34-39 Under 35 U.S.C. §102(b)

Claims 23-26 and 34-39 stand rejected as anticipated under 35 U.S.C. §102(b) over Robert M. Losee, Jr. (Minimizing Information Overload: The Ranking of Electronic Messages). It is respectfully submitted that this rejection should be reversed for at least the following reasons. Losee does not teach each and every element of the subject invention as recited in the subject claims.

> A single prior art reference anticipates a patent claim only if it expressly or inherently describes each and every limitation set forth in the patent claim. *Trintec Industries, Inc., v. Top-U.S.A. Corp.*, 295 F.3d 1292, 63 U.S.P.Q.2D 1597 (Fed. Cir. 2002); *See Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ 2d 1051, 1053 (Fed. Cir. 1987). The identical invention must be shown in as complete detail as is contained in the ...

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claim. *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 9 USPQ2d
1913, 1920 (Fed. Cir. 1989).

The subject invention relates to providing controls and displays for acquiring user preferences for a system and method to automatically classify, prioritize, and present information to a user or system in a preferred format, location, and time. The applicants' claimed invention can determine the cost of not reviewing a message and the cost of reviewing a message, and then compare these costs to determine if a notification of the message should be presented to a user. The cost of non-review is based upon a cost function to the user versus time of non-review of the message. In particular, independent claim 23 recites *determining an expected loss of non-review of the message at a current time based at least on the message priority and an expected rate of lost opportunity for the user resulting from non-review of the message as a function of time.* The Examiner asserts in the Advisory Action that the claim does not contain a time element. However, the claim clearly recites an expected rate of lost opportunity for the user resulting from non-review of the message *as a function of time*. Furthermore, Losee does not teach or suggest the aforementioned novel aspects of applicants' invention as recited in the subject claim. Losee teaches a system for ranking messages that determines the expected cost of not selecting a message for review. Though, contrary to assertions in the Office Action, Losee fails to disclose that the expected cost is based on non-review as a function of time. The section of prior art referenced in the Office Action describes a decision criteria for determining if a message should be examined that is based on the cost of not reviewing a message exceeding the cost of reviewing a message. Losee teaches that the cost of rejecting a message is based on the cost of non-review for a given relevance class(priority). The cited art fails to include a factor for time in the cost determination. The applicants' claimed invention teaches a rate of lost opportunity, which is a cost per unit of time that can be linear or non-linear. Therefore, Losee fails to teach or suggest determining an expected loss of non-review of the message at a current time based at least on ... an expected rate of lost opportunity for the user resulting from non-review of the message as a function of time.

Accordingly, applicants' representative respectfully submits that Losee fails to teach or suggest all limitations of applicants' invention as recited in independent claim 23 (and claims 24-

26 and 34-39 that depend there from), and thus fails to anticipate the subject claimed invention. Therefore, it is readily apparent that this rejection should be withdrawn.

B.   Rejection of Claims 1-10 and 40 Under 35 U.S.C. §103(a)

Claims 1-10 and 40 stand rejected as obvious under 35 U.S.C. §103(a) over Smith, *et al.*, (US 6,463,462 B1) in view of Badt *et al.*, (US 6,542,868 B1), Anderlind *et al.*, (US 6,781,972 B1), Wright *et al.*, (US 6,078,568 A), and Cooper *et al.*, (US 6,757,362 A). It is respectfully submitted that this rejection should be withdrawn for at least the following reasons. Smith *et al.*, Badt *et al.*, Anderlind *et al.* Wright *et al.*, and Cooper *et al.*, alone or in combination, fail to teach or suggest each and every limitation of applicants' claimed invention.

> To reject claims in an application under· §103, an examiner must establish a *prima facie* case of obviousness. A *prima facie* case of obviousness is established by a showing of three basic criteria. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. *See* MPEP §706.02(j). The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. *See In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Independent claim 1 (and similarly independent claim 40) recites *one or more inputs associated with the display objects to facilitate adaptation of the user interface to one or more preferences of a user, the one or more inputs includes at least one or more user preferences for assigning a priority value to a voice message based at least in part on acoustical properties of the voice message*. Applicants' claimed invention can examine acoustical properties of the voice message, such as pitch, rate, inflections, etc. in making a determination of the priority to assign to the message. For example, the system can assign a higher priority if the rate is faster indicating urgency in the caller's voice. As conceded in the Office Action, Smith *et al.* fails to teach assigning a priority value based on acoustical properties of the voice message. Contrary to

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assertions in the Office Action, Badt *et al* also fails to teach or suggest this novel feature. The section of prior art cited states that voice recognition is used to identify the caller. The system then determines where in the hierarchical organization the caller is positioned. The priority is then assigned based on the caller's level within the organization, not on the acoustical properties of the voice message, such as pitch, rate, inflections, etc. Furthermore, Anderlind *et al.* Wright *et al.*, and Cooper *et al.* are silent regarding employing acoustical properties of voice messages to assign priority. Anderlind *et al.* teaches a system and method creating profiles to control delivery of messages to a mobile communications device. Anderlind *et al.* teaches controlling of message priority, however, Anderlind *et al.* fails to teach or suggest that priority for a voice message is based upon the acoustical properties of a voice message. Wright, *et al.* teaches a system for managing data packets on a communication network and does not discuss assignment of message priority. Cooper, *et al.* teaches a system for inputting and receiving information such as e-mail and news by speech. Cooper, *et al.* teaches analysis of acoustical properties of the speech of a user that is retrieving messages for the purpose of identifying the emotional state of the user, so that adjustments can be made in the system voice prompts to be more in line with the user's emotional state. Cooper, *et al.* does not teach or suggest analyzing acoustical properties of messages that the user is receiving or sending. Furthermore, Cooper, *et al.* does not teach or suggest a system for assigning priorities to messages and therefore also fails to teach or suggest using an acoustical analysis to assign priorities to voice messages. There is no suggestion in any of the cited art for assignment of priority based on acoustical properties of a voice message.

In view of the foregoing, applicants' representative respectfully submits that Smith *et al.*, Badt *et al.*, Anderlind *et al.* Wright *et al.*, and Cooper *et al.*, alone or in combination, fail to teach or suggest all limitations of applicants' invention as recited in independent claims 1 and 40 (and claims 2-10 that depend there from), and thus fails to make obvious the subject claimed invention. Therefore, it is readily apparent that this rejection should be withdrawn.

C.   Rejection of Claims 1 and 11 Under 35 U.S.C. §103(a)

Claims 1 and 11 stand rejected as obvious under 35 U.S.C. §103(a) over Smith, *et al.*, (US 6,463,462 B1) in view of Badt *et al.*, (US 6,542,868 B1) and Matthew Marx (CLUES: Dynamic Personalized Message Filtering), hereinafter referred as Marx. It is respectfully submitted that this rejection should be withdrawn for at least the following reasons. Smith *et al.*,

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Badt *et al.*, and Marx, alone or in combination, fail to teach or suggest each and every limitation of applicants' claimed invention. As noted *supra*, Smith, *et al.* and Badt *et al.* do not teach or suggest each and every element of the subject invention as recited in independent claim 1, and Marx fails to make up for the aforementioned deficiencies of Smith, *et al.* and Badt *et al.* Marx teaches a prioritization system for e-mail and phone calls based on rules that are automatically generated by the system. However, Marx fails to teach or suggest that priority for a voice message is based upon the acoustical properties of a voice message.

Accordingly, applicants' representative respectfully submits that Smith, *et al.*, Badt *et al.* and Marx, alone or in combination, fail to teach or suggest all limitations of applicants' invention as recited in independent claim 1 (and claim 11 that depends there from). Therefore, it is readily apparent that this rejection should be withdrawn.

D.   Rejection of Claims 1, 12, 13 and 19-22 Under 35 U.S.C. §103(a)

Claims 1, 12, 13 and 19-22 stand rejected as obvious under 35 U.S.C. §103(a) over Smith, *et al.*, (US 6,463,462 B1) in view of Badt *et al.*, (US 6,542,868 B1), Eggleston *et al.* (US 6,101,531 A), and Wright *et al.*, (US 6,078,568 A). It is respectfully submitted that this rejection should be withdrawn for at least the following reasons. Smith *et al.*, Badt *et al.*, and Eggleston *et al.* and Wright *et al.*, alone or in combination, fail to teach or suggest each and every limitation of applicants' claimed invention. As discussed above, Smith, *et al.*, Badt *et al.*, and Wright *et al.* do not teach or suggest each and every element of the subject invention as recited in independent claim 1, and Eggleston *et al.* fails to make up for the aforementioned deficiencies of Smith, *et al.*, Badt *et al.*, and Wright *et al.* Eggleston, *et al.* teaches a system and method for prioritizing e-mail to be downloaded from a server to a local machine. However, Eggleston, *et al.* is strictly concerned with e-mail and therefore fails to teach or suggest that priority for a voice message is based upon the acoustical properties of a voice message.

Accordingly, applicants' representative respectfully submits that Smith *et al.*, Badt *et al.*, and Eggleston *et al.* and Wright *et al.*, alone or in combination, fail to teach or suggest all limitations of applicants' invention as recited in independent claim 1 (and claim 12, 13, and 19-22 that depend there from). Therefore, it is readily apparent that this rejection should be withdrawn.

E.   Rejection of Claims 1 and 14 Under 35 U.S.C. §103(a)

Claims 1 and 14 stand rejected as obvious under 35 U.S.C. §103(a) over Smith, *et al.*, (US 6,463,462 B1) in view of Badt *et al.*, (US 6,542,868 B1) and Jonathan Isaac Helfman *et al.* (Ishmail: Immediate Identification of Important Information). It is respectfully submitted that this rejection should be withdrawn for at least the following reasons. Smith *et al.*, Badt *et al.*, and Helfman *et al.*, alone or in combination, fail to teach or suggest each and every limitation of applicants' claimed invention. As noted *supra*, Smith, *et al.* and Badt *et al.* do not teach or suggest each and every element of the subject invention as recited in independent claim 1, and Helfman *et al.* fails to make up for the aforementioned deficiencies of Smith, *et al.* and Badt *et al.* Helfman, *et al.* teaches a prioritization system for e-mail based upon keyword based filter rules. However, Helfman, *et al.* is also strictly concerned with e-mail and therefore fails to teach or suggest that priority for a voice message is based upon the acoustical properties of a voice message.

Accordingly, applicants' representative respectfully submits that Smith, *et al.*, Badt *et al.* and Helfman *et al.*, alone or in combination, fail to teach or suggest all limitations of applicants' invention as recited in independent claim 1 (and claim 14 that depends there from). Therefore, it is readily apparent that this rejection should be withdrawn.

F.   Rejection of Claims 1 and 15-18 Under 35 U.S.C. §103(a)

Claims 1 and 15-18 stand rejected as obvious under 35 U.S.C. §103(a) over Smith, *et al.*, (US 6,463,462 B1) in view of Badt *et al.*, (US 6,542,868 B1) and Jonathan Isaac Abu-Hakima (US 6,499,021 B1). It is respectfully submitted that this rejection should be withdrawn for at least the following reasons. Smith *et al.*, Badt *et al.*, and Abu-Hakima, alone or in combination, fail to teach or suggest each and every limitation of applicants' claimed invention. As discussed above, Smith, *et al.* and Badt *et al.* do not teach or suggest each and every element of the subject invention as recited in independent claim 1, and Abu-Hakima fails to make up for the aforementioned deficiencies of Smith, *et al.* and Badt *et al.* Abu-Hakima teaches a system for prioritizing messages from various sources, such as e-mail, fax, phone, etc. based on attributes of the message and then forwarding messages to a user based on the priority. However, Abu-Hakima fails to teach or suggest that one of those attributes is the acoustical properties of a voice

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message. Therefore, Abu-Hakima fails to teach or suggest wherein a voice message is assigned a priority based at least in part on acoustical properties of the voice message.

Accordingly, applicants' representative respectfully submits that Smith, *et al.*, Badt *et al.* and Abu-Hakima, alone or in combination, fail to teach or suggest all limitations of applicants' invention as recited in independent claim 1 (and claims 15-18 that depend there from). Therefore, it is readily apparent that this rejection should be withdrawn.

G.   Rejection of Claims 27-33 Under 35 U.S.C. §103(a)

Claims 27-33 stand rejected as obvious under 35 U.S.C. §103(a) over Robert M. Losee, Jr. (Minimizing Information Overload: The Ranking of Electronic Messages) as applied to claim 23 above, and further in view of Eggleston *et al.* (US 6,101,531 A). It is respectfully submitted that this rejection should be withdrawn for at least the following reasons. Losee in further view of Eggleston fails to teach or suggest each and every limitation of applicants' claimed invention.

The subject claims depend from independent claim 23. As noted *supra*, Losee does not teach or suggest each and every element of the subject invention as recited in independent claim 23, and Eggleston fails to make up for the aforementioned deficiencies of Losee. Eggleston, *et al.* does not teach or suggest any cost benefit analysis associated with message review, and therefore fails to teach or suggest determining an expected loss of non-review of the message at a current time based at least on ... an expected rate of lost opportunity for the user resulting from non-review of the message as a function of time.

Accordingly, applicants' representative respectfully submits that Losee and Eggleston, *et al.*, alone or in combination, fail to teach or suggest all limitations of applicants' invention as recited in claims 27-33. Therefore, it is readily apparent that this rejection should be withdrawn.

H.   Rejection of Claims 41-54 Under 35 U.S.C. §103(a)

Claims 41-54 stand rejected as obvious under 35 U.S.C. §103(a) over Juha Takkinen (CAFE: A Conceptual Model for Managing Information in Electronic Mail) in view of Badt *et al.*, (US 6,542,868 B1) and Jonathan Isaac Abu-Hakima (US 6,499,021 B1). It is respectfully submitted that this rejection should be withdrawn for at least the following reasons. Takkinen, Badt *et al.*, and Abu-Hakima, alone or in combination, fail to teach or suggest each and every limitation of applicants' claimed invention.

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Independent claim 41 recites *wherein a voice message is assigned a priority value based at least in part on acoustical properties of the voice message*. As discussed above, Abu-Hakima and Badt *et al.* do not teach or suggest assigning a priority value based at least in part on acoustical properties of the voice message, and Takkinen fails to make up for this deficiency of Abu-Hakima and Badt *et al.* Takkinen teaches a categorization system for e-mail that has three user modes of operation employing three different categorization techniques based upon how busy the user indicates they are currently. However, Takkinen is strictly concerned with e-mail and therefore fails to teach or suggest that the categorization techniques take into account acoustical properties of voice messages in determining a priority.

Accordingly, applicants' representative respectfully submits that Takkinen, Badt *et al.*, and Abu-Hakima, alone or in combination, fail to teach or suggest all limitations of applicants' invention as recited in independent claim 41 (and claims 42-51 that depend there from), and thus fails to make obvious the subject claimed invention. Therefore, it is readily apparent that this rejection should be withdrawn.

I.   Rejection of Claims 55-85 Under 35 U.S.C. §103(a)

Claims 55-85 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Jonathan Isaac Abu-Hakima (US 6,499,021 B1) in view of Badt *et al.*, (US 6,542,868 B1), Wright *et al.*, (US 6,078,568 A), and Eggleston, *et al.* (US 6,101,531 A). It is respectfully submitted that this rejection should be withdrawn for at least the following reasons. Abu-Hakima, Badt *et al.*, Wright *et al.*, and Eggleston, *et al.*, alone or in combination, fail to teach or suggest each and every limitation of applicants' claimed invention.

Independent claim 55 (and similarly independent claim 78) recites wherein a voice message is assigned a priority based at least in part on **acoustical properties of the voice message.** As noted supra, Abu-Hakima, Badt et al., Wright et al., and Eggleston, et al., do not teach or suggest assigning a priority value based at least in part on acoustical properties of the voice message. Accordingly, applicants' representative respectfully submits that Abu-Hakima, Badt et al., Wright et al., and Eggleston, et al., alone or in combination, fail to teach or suggest all limitations of applicants' invention as recited in independent claims 55 and 78 (and claims 56-77, and 79-85 that depend therefrom), and thus fails to make obvious the subject claimed invention. Therefore, it is readily apparent that this rejection should be withdrawn

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J.   Conclusion

For at least the above reasons, the claims currently under consideration are believed to be patentable over the cited references. Accordingly, it is respectfully requested that the rejections of claims 1-85 be reversed.

If any additional fees are due in connection with this document, the Commissioner is authorized to charge those fees to Deposit Account No. 50-1063 [MSFTP225USA].

Respectfully submitted,
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VIII.   Claims Appendix (37 C.F.R. §41.37(c)(1)(viii))

1.   A user interface to manage electronic messages, comprising:

a display providing one or more display objects associated with delivery of one or more messages, the messages being automatically classified according to a respective priority value; and

one or more inputs associated with the display objects to facilitate adaptation of the user interface to one or more preferences of a user, the one or more inputs includes at least one or more user preferences for assigning a priority value to a voice message based at least in part on acoustical properties of the voice message.

2.   The system of claim 1, the one or more display objects including one or more profiles that relate to a time and manner of delivery of the one or more messages.

3.   The system of claim 2, the one or more profiles relating to an active profile and a default profile configurable by the user.

4.   The system of claim 2, the one or more profiles are associated with one or more delivery options for sending the messages to a device.

5.   The system of claim 4, the one or more delivery options including at least one of send messages to a mobile device, send messages from a folder associated with the mobile device, enable prioritized delivery.

6.   The system of claim 4, the delivery options including chunking options, the chunking options comprise at least one of holding and delivering messages until a predetermined time specified by the user, holding and delivering messages until a predetermined number of messages have accumulated, and holding and delivering messages based upon a predetermined inactivity of a computer.

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7.   The system of claim 2, the one or more profiles have an associated priority setting such that messages are transmitted based upon a threshold configurable by the user.

8.   The system of claim 7, the priority setting associated with a display object having a slider to adjust the threshold, the threshold having a range from high priority messages sent to all messages sent to a mobile device.

9.   The system of claim 2, the one or more profiles including at least one of a calendar and time setting associated with the one or more display objects.

10.   The system of claim 2, the one or more profiles are associated with at least one of work, home, out of office and do not disturb.

11.   The system of claim 1, the one or more display objects including status information associated with an amount of learning that has been achieved by a priorities system.

12.   The system of claim 1, the one or more display objects selectable to send a summary of information to a device associated with the one or more messages.

13.   The system of claim 6, the one or more display objects including a reset of the amount of messages sent to the device.

14.   The system of claim 1, the one or more display objects comprising one or more rules configurable by the user to effect delivery of the messages to a device, the one or more rules including selection options of at least one of sending messages based on importance, sending messages based on the user's name and a TO field, sending messages based on the user's name and a CC field, and sending messages based on a source of the message.

15.   The system of claim 1, further comprising providing feedback to the user *via* the one or more display objects regarding learning associated with a priorities system.

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16.   The system of claim 15, the feedback includes information relating to learning when messages are deleted by the user.

17.   The system of claim 15, the feedback includes information relating to where messages are learned from.

18.   The system of claim 15, further comprising at least one of back-up, restore, and reset options regarding the learning.

19.   The system of claim 1, further comprising one or more device options relating to how messages are displayed on a device.

20.   The system of claim 19, the one or more device options further comprising a selectable compression setting to control the amount of information displayed.

21.   The system of claim 19, the one or more device options further comprising limiting a number of messages sent, limiting the number of characters in the messages, and automatically resetting the number of messages sent.

22.   The system of claim 19, the one or more device options further comprising configuring display information relating to a sender of the messages.

23.   A method associated with message delivery, comprising:
        generating a priority associated with a message;
        determining an expected loss of non-review of the message at a current time based at least on the message priority and an expected rate of lost opportunity for the user resulting from non-review of the message as a function of time;
        determining an expected cost of outputting the message at the current time; and
        alerting a user of the message in response to determining that the expected loss is greater than the expected cost.

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24.   The method of claim 23, the expected loss of non-review comprises determining a likelihood that the user will review message text at a future time.

25.   The method of claim 23, the expected rate of lost opportunity for the user resulting from non-review of the message as a function of time is non-linear.

26.   The method of claim 23, wherein the priority is generated by a classifier configured as at least one of a Bayesian classifier and a support-vector machine classifier.

27.   The method of claim 23, further comprising providing a current profile selected from one of a plurality of profiles, at least a portion of the plurality of profiles editable by the user to reflect a different context.

28.   The method of claim 27, the plurality of profiles is schedulable on a per-day and by-time basis.

29.   The method of claim 28, the plurality of profiles provides a chunk setting such that the message is delivered to a communications modality in conjunction with one or more other messages.

30.   The method of claim 28, the plurality of profiles provides a chunk setting such that the message is delivered to a communications modality when a specified period has expired.

31.   The method of claim 23, further comprising, prior to alerting the user, formatting the message.

32.   The method of claim 31, the formatting comprises compressing the message.

33.   The method of claim 31, the formatting comprises fragmenting the message.

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34.   The method of claim 23, further comprising determining an expected criticality for the prioritized messages.

35.   The method of claim 34, wherein the expected criticality (EC) is expressed as:

$$EC = \sum_i C^d(H_i) p(H_i \mid E^d)$$

wherein C is a cost function that relates to a cost rate at which cost is accrued, d is a delay, E is an event, and H is a criticality class.

36.   The method of claim 34, wherein the expected criticality is expressed as a function of time.

37.   The method of claim 36, an expected loss is expressed as at least one of:

$$EL = \sum_i^n p(critical_i) C(critical_i) t; \text{ and}$$

$$EL = \int_0^t p(critical_i) C(critical_i, t) dt$$

wherein EL is an expected loss, $p(critical_i)$ is a probability that a message has criticality i, $C(critical_i)$ is a cost function for the message having the criticality i, n is a total number of criticality classes minus one, and t is the time delay before reviewing the message.

38.   The method of claim 37, the expected loss is expressed as at least one of:

$$EL' = \sum_j p(t_j|E) \sum_i^n p(critical_i) C(critical_i) t_j; \text{ and}$$

$$EL' = \sum_j p(t_j|E) \int_0^{t_j} p(critical_i) C(critical_i, t) dt$$

wherein EL' is an uncertainty in time of delay, E represents one or more observations about a user state, and i and j are indexes, i and j being integers.

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39.   The method of claim 38, E is at least one of a calendar, a room acoustic, a desktop activity, a time since last touched an active device.

40.   A user interface to manage electronic messages, comprising:

    means for providing graphical displays associated with one or more messages that have been automatically classified according to a priority of the respective messages; and

    means for configuring the graphical displays according to one or more user preferences associated with the priority and delivery of the one or more messages, the one or more user preferences includes at least assigning a priority value to a voice message based at least in part on acoustical properties of the voice message.

41.   A method for delivering messages to a device, comprising:

    scheduling a period when one or more user profiles are activated;

    configuring at least one set of parameters for the one or more profiles;

    assigning priority values to one or more messages, wherein a voice message is assigned a priority value based at least in part on acoustical properties of the voice message; and

    delivering the one or more messages based at least in part on the priority values, the profile that is activated, and the at least one set of parameters.

42.   The method of claim 41, further comprising assigning at least one of a color and a sound to indicate the priority of the messages.

43.   The method of claim 41, further comprising deferring messages until a more convenient time established by the user.

44.   The method of claim 41, further comprising providing status information relating to why a message is of a determined priority.

45.   The method of claim 41, further comprising observing a previous history of activity and providing feedback as to a message delivery volume based upon the history.

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46.   The method of claim 41, further comprising employing an information agent to consider restrictions from other parties before delivering the one or more messages.

47.   The method of claim 41, further comprising activating one or more rules that operate to influence when messages are sent to a user.

48.   The method of claim 47, the one or more rules include an if and then construct such that if an event occurs then a message is automatically assigned a predetermined priority.

49.   The method of claim 47, the one or more rules include an if and then construct such that if an event occurs then a priority value of a learning process is disclosed.

50.   The method of claim 41, the one or more rules include an if and then construct such that if a message is received from a selected communications channel, then a message is automatically assigned a predetermined priority.

51.   The method of claim 41, further comprising automatically reviewing messages by an order determined by the priority value.

52.   The method of claim 41, further comprising automatically calling the user if the priority value is above a predetermined threshold.

53.   The method of claim 41, further comprising converting audio messages into text.

54.   The method of claim 53, further comprising determining a priority for the messages based upon at least one of the pitch, rate, content, and inflection of the messages.

55.   A user interface for an adaptive prioritization and routing system, comprising:

one or more controls and displays to at least one of acquire user preferences, inspect behavior, and guide learning and decision policies of the adaptive prioritization and routing system, wherein a voice message is assigned a priority based at least in part on acoustical properties of the voice message; and

a user interface associated with the one or more controls and displays that facilitates inspection, control and learning associated with alerting and routing prioritized messages.

56.   The user interface of claim 55, further comprising a plurality of parameters that are configured in conjunction with various configuration and adjustment options to facilitate personalization of the user interface.

57.   The user interface of claim 56, the personalization includes at least one of employing explicit and implicit user feedback relating to how messages are classified and subsequently provided to the user.

58.   The user interface of claim 57, the feedback is employed to guide learning and decision policies in the adaptive prioritization and routing system.

59.   The user interface of claim 57, the feedback includes dialog that is provided to users to further refine at least one of learning and decision policies in the adaptive prioritization and routing system.

60.   The user interface of claim 57, the explicit feedback includes such actions as configuring the user interface to consider a selection of messages as being more important than another selection of messages and altering learning about how decisions are made regarding message urgency.

61.   The user interface of claim 57, the implicit feedback includes monitoring various context aspects of the user to determine message importance.

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62.   The user interface of claim 61, the implicit feedback includes at least one of monitoring sounds, keyboard activities, presence detectors, pauses when reviewing messages, how quickly messages are opened and deleted, and whether messages are saved, copied and forwarded.

63.   The user interface of claim 57, the feedback includes directing messages to the user regarding learning decisions such as at least one of "You are about to delete messages that have not yet been employed in the learning process," and messages relating to how and why messages were classified a certain priority.

64.   The user interface of claim 55, further comprising one or more configuration and adjustment options that include at least one of profile options, routing options, alerting options, chunking options, schedule options, and context-sensitive control options.

65.   The user interface of claim 64, the chunking options include grouping M messages, M being an integer, the M messages are held as a group before delivery of the messages to the user.

66.   The user interface of claim 55, further comprising one or more rules that act in conjunction with a routing system, learning status and configuration options for guiding and inspecting the state of learning of a message urgency system.

67.   The user interface of claim 66, the one or more rules including conditions that are applied in at least one of a disjunctive and a conjunctive manner.

68.   The user interface of claim 55, further comprising one or more device option configurations for controlling message output to a selected message reception and display device.

69.   The user interface of claim 55, further comprising prioritized messages having acoustical properties including at least one of prosadic features, temporal patterns of rate, pitch, inflections, and an overall energy associated with voice messages.

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70.   The user interface of claim 55, further comprising a priority threshold adjustment that facilitates control of how many messages are sent to a users device.

71.   The user interface of claim 70, further comprising an overlay adjustment that limits the number of messages sent to the users device per a given timeframe.

72.   The user interface of claim 55, further comprising a threshold adjustment that is employed as a bound on the total dollars allotted for forwarding messages to a user.

73.   The user interface of claim 72, the user specifies that a system sends the most urgent messages, but at a certain cost per message by a routing company, adjust the threshold so that it would expect to stay within a certain cost per day.

74.   The user interface of claim 55, further comprising one or more deferral policies that are given as bounds such that a message of a particular urgency will not wait more than at least one of a predetermined and dynamically computed upper limit of time.

75.   The user interface of claim 74, the policies are at least in part based on a function of the message urgency.

76.   The user interface of claim 75, a user specifies at least one of that a message of high urgency should be transmitted with an alert to one or more active devices as soon as possible and to be available for review if the user happens to inspect messages that are waiting.

77.   The user interface of claim 76, further comprising a policy that if the user is more than a specified level of non-interruptability and the message has not been observed, then wait a predetermined time before alerting the user.

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78.   A user interface for an adaptive prioritization and routing system, comprising:

one or more controls and displays to acquire message priority settings associated with the adaptive prioritization and routing system, including settings for priority of voice messages based at least in part on acoustical properties of the voice messages; and

a user interface associated with the one or more controls and displays that provides at least one of an adjustable control of an amount of messages received *via* the message priority settings and a feedback directed to the user relating to the settings.

79.   The user interface of claim 78, the feedback includes at least one of a quantity of alerts and messages that would have been transmitted to the user per at least one of a time and within a specified bound in time.

80.   The user interface of claim 79, further comprising monitoring user actions for each of several different routing parameters based upon a threshold on importance required to send a message beyond the parameters that were employed.

81.   The user interface of claim 79, further comprising a user display including at least one of what would have happened had the settings been changed, and a display for a set of thresholds along a continual scale thresholds.

82.   The user interface of claim 81, the feedback further comprising previously tracked numbers of messages that would have been received at different simulated values of the threshold.

83.   The user interface of claim 82, further comprising providing feedback over at least one of a day, week, and month that is displayed at respective settings so as to be reviewed by users as guides to roughly predict future behavior of the adaptive prioritization and routing system for potential settings of the threshold.

84.   The user interface of claim 82, further comprising employing recent history as a predictor of the future.

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85.   The user interface of claim 82, further comprising advanced simulations that are employed to perform "what-if" analyses for at least one of different settings, parameters and policies, such that new settings can be based on an expected number of alerts per given timeframe at different settings.

IX.   Evidence Appendix (37 C.F.R. §41.37(c)(1)(ix))

None.

X.   Related Proceedings Appendix (37 C.F.R. §41.37(c)(1)(x))

None.